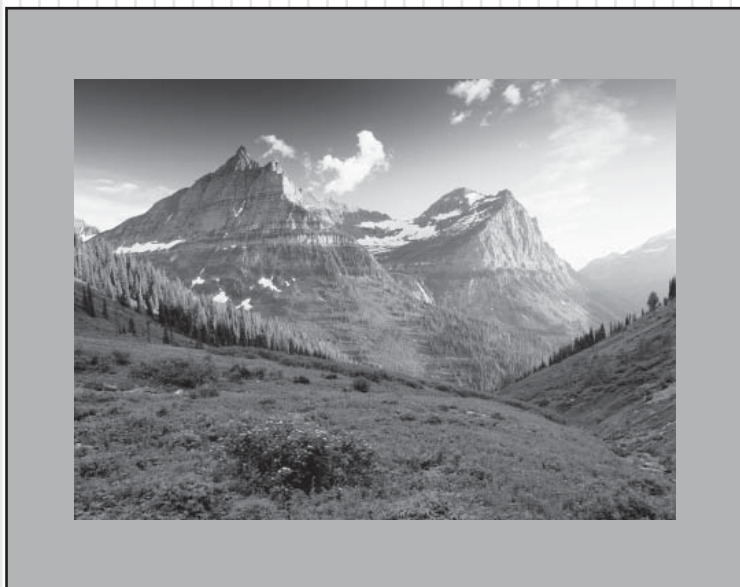


*Montana*  
*Comprehensive Assessment*  
*System (MontCAS, Phase 2)*  
*Criterion-Referenced Test (CRT)*

COMMON CONSTRUCTED-RESPONSE ITEM RELEASE  
SCIENCE, GRADE 4

2009



OFFICE OF PUBLIC INSTRUCTION

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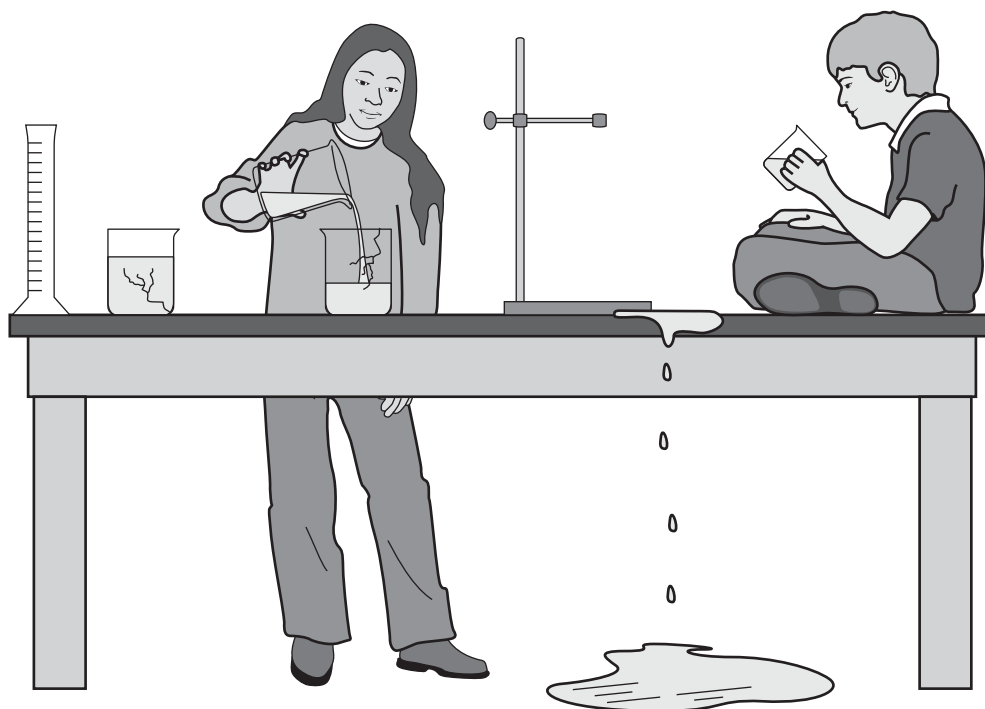
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# Science Session 1

**Write your answer in the space provided for it in your Student Response Booklet.**

27. The picture below shows students conducting an experiment in an unsafe school science work area.

## Conducting an Experiment



Name **four** safety problems in the school science work area. Explain why each is a safety problem.

## Scoring Guide

Score	Description
4	Response demonstrates a thorough understanding of how to safely conduct an experiment. Response includes four detailed explanations of safety problems in the science work area. Response contains no errors or omissions.
3	Response demonstrates a general understanding of how to safely conduct an experiment. Response includes four detailed explanations of safety problems in the science work area. Response has one error or omission.
2	Response demonstrates a limited understanding of how to safely conduct an experiment. Response includes four detailed explanations of safety problems in the science work area. Response has errors or omissions.
1	Response demonstrates a minimal understanding of how to safely conduct an experiment. Response includes four detailed explanations of safety problems in the science work area. Response has several errors or omissions.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

## Scoring Notes

- cracked glass that could break when handled or heated could cause cut or burn
- glassware near edge of table that could fall and break; someone could get a cut
- liquid that might be corrosive or cause someone to fall because of spill on floor and table
- student sitting on science table can get chemicals on skin or clothes; could fall off table
- student about to drink from a beaker that might contain a poison
- long hair is not tied back, could get into chemicals or burn if using an open flame
- no goggles when handling a chemical that could get into eyes and cause damage
- tilting a beaker could cause a spill
- only have items on the lab bench that are needed for the experiment; prevent crowding, reducing spills that can damage skin or cause falling
- no horseplay; could cause spills, burns, cuts, etc.
- use lab aprons and gloves to protect skin from chemical damage
- work with a buddy so there is always someone to get help, or explain what happened
- should have adult supervision for correct procedure, needed in case of problems, to maintain a safe environment

## Notes:

- One point for each correct observation and explanation.
- Response can be safety rule not shown in the picture.
- A list of safety violations without explanations is given a score of 2 points. Reason why a situation pictured is a safety issue must be fully explained.

The glass is cracking, liquid is pouring off the table, the kid is sitting on the table, and their not wearing safety goggles. If the glass cracks the stuff inside will spill all over. The liquid is spilling off the table and that could cause a accident. The kid is sitting on the table and that is dangerous. Their not wearing safety goggles if something goes wrong in the experiment some one's eyes could get hurt.

One is that the boy is sitting on the table and he might fall. There is a spill of something and someone might slip. A girl is pouring some liquids into a cup that has a crack and the glass might break. There is a crack in the cup.

Score Point 2

Some things not safe are that one  
kid is on the table, there is a leak  
the jaws are cracking and they're not  
wearing goggles.

#1 Is because the glass of the thing you use for a experiment and all the stuff would fall out. #2 All of the liquid would tip over and fall out and spread every where. #3 If you don't make it right it might explode. #4 Also If you don't make sure nothing is cracked before you start you could make a huge mess.

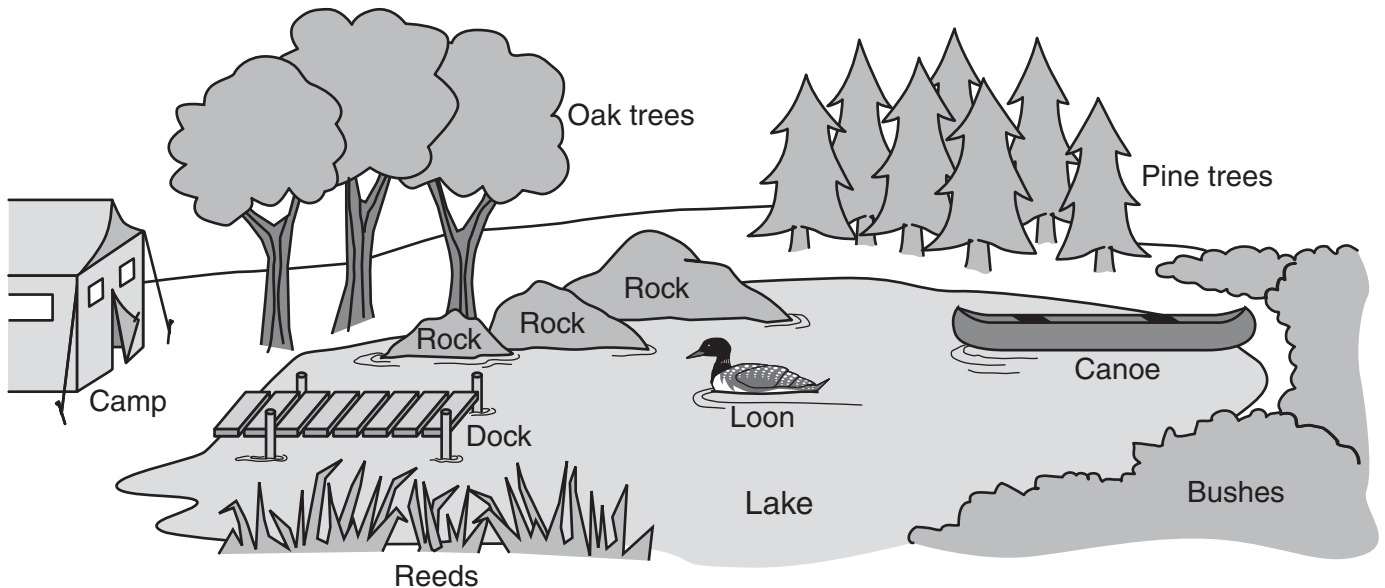


A. four safe places to be  
 in school is cafeteria the hall  
 a classroom or a library. B. The  
 cafeteria because its safe nobody  
 deserts you. The another  
 safe place is the Halls  
 because its quiete and also  
 Third place to be safe  
 is a CLASS room because  
 you have other people by  
 you. fourth the library be cause  
 so silent and asome beca  
 these you are don  
 whif your project you  
 can read books all  
 day.

## Science Session 3

Write your answer in the space provided for it in your Student Response Booklet.

81. Look at the picture below.



Describe the position of the loon by locating it relative to **four** other objects.

## Scoring Guide

Score	Description
4	Response demonstrates a thorough ability to describe the position of an object. Student correctly describes the position of the loon by locating it relative to four other objects. Response contains no errors, misconceptions, or omissions.
3	Response demonstrates a general ability to describe the position of an object. Student describes the position of the loon by locating it relative to three other objects. Response contains an error, misconception, or omission.
2	Response demonstrates a partial ability to describe the position of an object. Student describes the position of the loon by locating it relative to two other objects. Response contains errors, misconceptions, and/or omissions.
1	Response demonstrates a minimal ability to describe the position of an object. Student describes the position of the loon by locating it relative to one object. Response contains errors, misconceptions, and/or omissions.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

## Scoring Notes

The loon is:

- in front of the large rock (all of the rocks)
- to the left of the canoe
- in the middle of the lake or in the lake
- to the right or behind the reeds
- to the right of the oak trees
- to the right of the dock/camp
- on the left side of the pine trees (in front)
- to the left of the bushes
- north is top of the paper, east is right, west is left, south is bottom

**Note:** Zero points for giving a measured distance (four feet from canoe)

Score Point 4

The loon is south of the rocks and north east of the reeds. Also the loon is west of the canoe and east of the dock.

Score Point 3

The loon is located south from the rock and west from the canoe and north from the Reeds.

The loon is west of the trees and  
east of the dock and east and north  
of the rocks. The loon is swimming  
in the middle of the pond.

Score Point 1

The loon is sitting in the middle of the lake in the forest at a camp ground.

Score Point 0

The loon is close to the rocks and the dock.